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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/431,640	11/01/1999	DENNIS JAMES HERRELL	1001-0062	9015
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22120 7590 06/19/2002

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EXAMINER

TRAN, THANH Y

ART UNIT	PAPER NUMBER
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2841

DATE MAILED: 06/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/431,640

Applicant(s)

HERRELL, DENNIS JAMES

Examiner

Thanh Y. Tran

Art Unit

2841

~ The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 23-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 23-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 November 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Applicant's arguments with respect to claims 1-15 and 23-30 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "traces" and "an aperture" and "pairs of the traces" in claim 1; and "a plated through hole or conductive via" in claim 9; "nearest off-assembly connections" in claims 10, 11 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is unclear as to what Applicant means by "traces extending toward respective off-assembly connections" and "with mutual coupling between *adjacent* of the off-assembly connections", "the essentially parallel portions traversing the aperture"?

Claim 2 is unclear as to Applicant means by "the essentially parallel portions of corresponding pairs of traces pass over or under the aperture"?

Claim 9 is unclear as to what Applicant means by “an electrical connection between a trace and a respective off-assembly connection includes a plated through hole or conductive via?

Regarding claim 10, it is unclear as to what Applicant means by “thereby oppose respective of the initial cross-talk signals introduced at a corresponding one of the off-assembly connections by nearest neighbors thereof”.

Regarding claim 11, it is unclear as to what Applicant means by “wherein the nearest off-assembly connections *number two*” and “thereby oppose respective of the initial cross-talk signals introduced by the nearest off-assembly connections”.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-15 and 23-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Petersen (U.S. 4,814,963).

As best understood by Examiner, the claimed limitations in claims 1-15 and 23-30 are broadly met over Petersen.

As to claim 1, as best understood, Petersen discloses an electrical assembly (see Fig. 3) comprising: traces (52) extending toward respective off-assembly connections; and integrated transformer structures (14, 16, 18, 20) defined along the traces to induce compensating cross-talk signals having opposing polarity (+,-) to initial cross-talk signals associated with mutual

coupling between adjacent off-assembly connections (see Fig. 1, col. 3, lines 13-68), wherein one or more of the integrated transformer structures (14, 16, 18, 20) each comprise an aperture in a voltage plane (D.C voltage input) of the electrical assembly, and essentially parallel portions of corresponding pairs of the traces (see the parallel portions of input traces or output traces in figure 1).

Claim 2 does not defined over Petersen because of its unclear language.

As to claim 3, figure 1 shows the essentially parallel portions are coplanar with the voltage plane.

As to claim 4, figure 1 further shows the electrical assembly comprising the off-assembly connections.

As to claims 5-8, the assembly of Pertersen (as shown in figure 1) *inherently* including a board so that the traces can be mounted on the board for performing electrical functions; wherein the off-assembly connections include leads (see col. 6, lines 33-55).

As to claim 9, figure 1 shows the electrical assembly wherein the traces (52, 54) and the off-assembly connections are on opposing sides of the electrical assembly.

As to claim 10, figure 1 shows the electrical assembly wherein the off-assembly connections are organized as an array thereof; and wherein, for each of the traces (52 or 54), one or more of the integrated transformer structures (14, 16, 18, 20) are defined there-along to induce respective of the compensating cross-talk signal and thereby oppose respective of the initial cross-talk signals introduced at a corresponding one of the off-assembly connections (see Fig. 1, col. 3, lines 13-68) by nearest off-assembly connections of the corresponding one of the off-assembly connections.

As to claim 11, figure 1 shows the electrical assembly wherein the array is linear; and wherein, for essentially each of the traces (paths), two of the integrated transformer structures (14,16) are defined there-along to induce respective of the compensating cross-talk signals (see col. 3, lines 13-68).

Claim 12 recites limitations similar to claim 5. Therefore, it is rejected for the same reasons.

Claim 13, Petersen discloses the electronic assembly includes an integrated circuit chip (see Fig. 1, col. 6, lines 33-35).

As to claim 14, an electrical assembly inherently includes a chip carrier so that the traces can be mounted on the board for performing electrical functions.

Claim 15 recites limitations similar to claim 6. Therefore, it is rejected for the same reasons.

Claim 23 recites limitations similar to claim 1. Therefore, it is rejected for the same reasons.

As to claim 24, figure 1 shows an electrical assembly wherein the electrical traces are respectively coupled to the first and adjacent connections

Claim 25 recites limitations similar to claim 1. Therefore, it is rejected for the same reasons.

Claim 26 recites limitations similar to claims 1-3. Therefore, it is rejected for the same reasons.

Claim 27 recites limitations similar to claim 1. Therefore, it is rejected for the same reasons.

As to claim 28, Petersen discloses an electrical assembly (see Fig. 1) wherein the means for inducing compensating cross-talk signals define at least a portion of a cross-talk compensation circuit (see col. 3, lines 13-68).

Claim 29 recites limitations similar to claim 1. Therefore, it is rejected for the same reasons.

Claim 30 recites limitations similar to claims 2 and 3. Therefore, it is rejected for the same reasons.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Viadella et al. (U.S. 6,385,315) teaches relevant prior art.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Y. Tran whose telephone number is (703) 305-4757. The examiner can normally be reached on Monday through Thursday and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin, can be reached on (703) 308-3121. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3431.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

TYT

A handwritten signature in black ink, appearing to read 'DLM', is positioned above the printed name and title of David Martin.

**DAVID MARTIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800**